Decision on Fusion SciDAC Proposals

The Office of Fusion Energy Sciences (OFES) has selected two new SciDAC projects: *Center for Extended Magnetohydrodynamic Modeling* and *Center for Gyrokinetic Particle Simulations of Turbulent Transport in Burning Plasmas,* each of which will be funded at approximately $1M per year for the next three years.

The *Center for Extended Magnetohydrodynamic Modeling* is a consortium of Princeton Plasma Physics Laboratory (PPPL), Science Applications International Corporation, the University of Wisconsin, the University of Utah, Utah State University, TechX Corporation, the University of Colorado, New York University, and Massachusetts Institute of Technology, headed by Stephen Jardin of PPPL. It is aimed at developing powerful simulation codes for studying the macroscopic dynamics of MHD-like phenomena in fusion plasmas, such as sawteeth, tearing modes, resistive wall modes, fast ion modes, disruptions, edge localized modes, and pellet fueling.

The Center for Gyrokinetic Particle Simulations of Turbulent Transport in Burning Plasmas project is a consortium of PPPL, the University of Colorado, the University of California-Irvine, the University of California-Davis, the University of California-Los Angeles, Columbia University, and the University of Tennessee, led by of W. W. Lee of PPPL. The goal of this project is to develop gyrokinetic particle simulation codes to carry out simulations of turbulent transport to investigate plasma confinement properties of burning plasmas, such as the International Tokamak Experimental Reactor (ITER).

Although the principal investigators of both proposals are from PPPL, the funding will be widely spread among all of the participants, with PPPL receiving less than 30% of the total funding.

These two projects were selected from a total of seven proposals following a rigorous process that involved three types of peer review: a review of the scientific and technical merit of the proposed research, a review the relevance of the proposed research for burning plasmas, and a review of the computer science and applied math content. Office of Science program managers recruited a total of thirty-two reviewers to carry out the reviews of these proposals and selected the proposals that received the highest overall rankings (when all the various types of reviews were considered).